Introducing mobile technology for enhancing teaching and learning to the English language classroom in Bangladesh

M Mahruf C Shohel[*] and Tom Power
Department of Education, The Open University
m.m.c.shohel@open.ac.uk

Introduction

Mobile technology could have a significant role to play in educational development in the Global South (Banks, 2009; Banks et al, 2009; Onguko and Ngata, 2010). Recently, research has begun to focus upon mobile learning (e.g. Naismith et al, 2004), but the potential of mobile media players (for example, the iPod) is only recently being explored. It has been suggested that language learning is one of the disciplines particularly likely to benefit from widespread ownership of mobile devices such as phones and media players (Kukulska-Hulme, 2006). There are arguments and counter arguments whether it is appropriate to deployment of technologies for education, or not, in the Global South (Leach, 2008; Dhanarajan, 2001), but many governments from Africa, South Asia and South America are investing in different ICT enhanced educational projects (Leach et al, 2005; Power and Sankale, 2009).

The situation of English language teaching and learning in Bangladesh is not so good (EIA, 2009a). Rigid, unhelpful, old-fashioned and non-active teaching practices, chalk and talk kinds of teacher-dominated lecture-based pedagogy remain the norm in Bangladeshi school culture where students are in a passive role, limited to memorising facts and reciting them back to their teacher (Shohel and Howes, 2008; Shohel, 2008). This is also reflected in learning assessment practices. In Bangladesh, one in five teachers has no teaching qualification (UIS, 2006). But for each and every country 'schools and teachers remain central to the achievement of a quality education process' (Yates, 2007, p. 2). It is essential to train English language teachers without teaching qualifications, and to develop their level of English language proficiency and communicative language teaching (CLT) skills to improve their classroom practice in Bangladesh.

Mobile learning can be defined as 'any educational provision where the sole or dominant technologies are handheld or palmtop devices' (Traxler, 2005) which is available 'anywhere, anytime' (Geddes, 2004). In other words, learning mediated through any mobile devices that is accessible anywhere anytime is mobile learning (Kukulska-Hulme and Shield, 2008). Mobile technology can be used to increase access to authentic teaching and learning materials which could be used at a time convenient to teachers, such as when they are preparing lesson plans or while travelling to schools (Shohel and Banks, 2010; Shohel and Shrestha, 2010). Materials like this have a great impact on teachers' own learning and their classroom practice (Power, Deane and Hedges, 2009). However the use of technologies in education is very low in Bangladesh (EIA, 2009b). But there is some evidence from other studies that, without prior knowledge or experience of using particular new technologies, teachers and students could use them and bring about changes in educational outcomes (Leach, 2008; Leach et al, 2005). The English in Action programme (www.eiabd.com) in Bangladesh is therefore aimed at

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[*] Email: m.m.c.shohel@open.ac.uk

improving the teaching of English significantly in all sectors by introducing mobile technology to enhance teaching and learning in English language classrooms in Bangladesh as a means of integrating ICT into different aspects of school-based support systems.

EIA in Bangladesh

The English in Action (EIA) programme is a major nine-year (2008-2017) development programme initiated at the request of the Government of Bangladesh and funded by the Department for International Development (DfID) of the UK Government. It aims to equip twenty five million Bangladeshi school children with the skills to communicate in English to levels that will enable them to participate fully in national economic and social activities and global opportunities. There are four major strands to the EIA programme in Bangladesh:

- *Primary Education:* engages students and teachers through innovative classroom resources.
- *Secondary Education:* empowers teachers to change their classroom practice. These interventions are school-based, delivered through supported distance learning and enhanced by mobile technologies.
- *Adult Learning:* enables lifelong learning via interactive and digital media.
- *Research, monitoring and evaluation (RME):* evaluates on-going projects and researches the impacts of interventions.

As a partner in the EIA programme, The Open University UK is involved in developing teaching and learning materials for the teachers' professional development programme in Bangladesh. There are three operational phases in the EIA project:

- *Developmental Research (2008-2011):* to identify the most effective, scalable and sustainable model of supported Open Distance Learning for English Language Teachers in Bangladesh, and the most appropriate forms of mobile technology to support this. Working with 400 teachers, 80% of whom will be teaching in rural schools.
- *Upscalling (2011-2014):* taking the most effective and cost effective model of teacher professional development forward at scale. Working with at least 4-5,000 teachers, from five national districts in Bangladesh. 80% of teachers will be in rural schools.
- *Embedding (2014-2017):* making the teacher professional development programmes available across Bangladesh, through locally supported Open and Distance Learning. The final phase programme will require Public Private Partnership (PPP) to provide a 'teachers toolkit' of mobile technology, classroom resources, and teacher professional development materials.

UCEP Bangladesh

The Underprivileged Children's Educational Program (UCEP) is a leading non-government organization (NGO) in Bangladesh which provides general education and vocational training for working children. Currently over 30,000 poor working children, who have generally missed out on their primary education, are studying in UCEP schools. Pupils are accepted into the programme at no younger than age 10 for girls and 11 for boys. UCEP schools operate 3 shifts per day, each of 3 hours duration. As the children continue to work and earn while attending school, this allows a child to choose a shift which is convenient for him or her. This is decided in consultation with their parents, to minimise the economic loss to the family. Each three- hour shift is focused on general education, but where possible, examples are drawn from a technical context. For example, the English alphabet is taught by naming craft tools – D for dividers, H for hammer. Stories in the Bangla language are linked to the discovery of inventions and the use of agricultural and other techniques. After grade 8 UCEP

continues technical education training for 16 professional trades (see UCEP, 2008 for more detail).

The curriculum of UCEP is basically prescribed by the National Curriculum and Textbook Board (NCTB), at both primary and lower secondary level (grades 1 to 8). This curriculum has, however, been carefully abridged for the target student population. The curriculum covers Bangla (mother tongue), English, mathematics, social environment and hygiene but contents are more related to vocational trades. Therefore the students learn in a highly vocational and practical way, using English where necessary as technical vocabulary (EIA, 2009). At the end of their training they are guaranteed a job. In contrast to those in the formal government system, these poor working children attend school regularly and complete their education. The attendance rate is over 94% and the drop-out rate is very low (UCEP, 2008).

Normally UCEP teachers do not have a teaching qualification. They get some basic and subject-based training (Shohel and Banks, 2010). After each training session teachers go back to their own schools to carry on with their jobs (Howes et al, 2009). Sometimes teachers attend training outside their organisational setting in Bangladesh. But sometimes SAs and ASAs get opportunities to attend training abroad. There is no refresher training for UCEP teachers in terms of continuous professional development (CPD).

EIA Model of Teachers' Professional Development and UCEP
The EIA programme in Bangladesh is based around four strands, namely:
- ➢ Communicate
- ➢ Connect
- ➢ Create
- ➢ Community.

These strands subsume a wide spectrum of information and communication technology (ICT) resources for secondary teachers from the simplest to the technically more demanding. The Communicate strand is core for all teachers in the pre-pilot phase and is designed to encourage and support the use of communicative language teaching. In this phase English language teachers are provided with media players (iPods), preloaded with video and audio language learning resources, along with battery-powered speakers for use in the classroom. The programme contains 12 modules, each centred on a particular activity designed to be taught in a secondary classroom. Each module demonstrates the activity, explores the principles underlying it, and encourages teachers to use, adapt and extend this and similar activities. During the pre-pilot phase (July, 2009- June, 2010), the Communicate strand of the Secondary Teaching and Learning Programme (STLP) is being implemented in UCEP schools. This STLP is based on a range of 'blended' support systems (see Figure 1 below) for teachers: these might include an orientation workshop, a teacher guide, a multi-media player (iPod), cluster meetings of teachers on the programme, a pairing of EIA teachers from each school, school visits from EIA staff giving feedback, and technical assistance. It has been an experiential learning process for those tasked with implementing the programme as well as the teachers. UCEP schools have been treated as a 'test-bed' for the mainstream pilot phase.
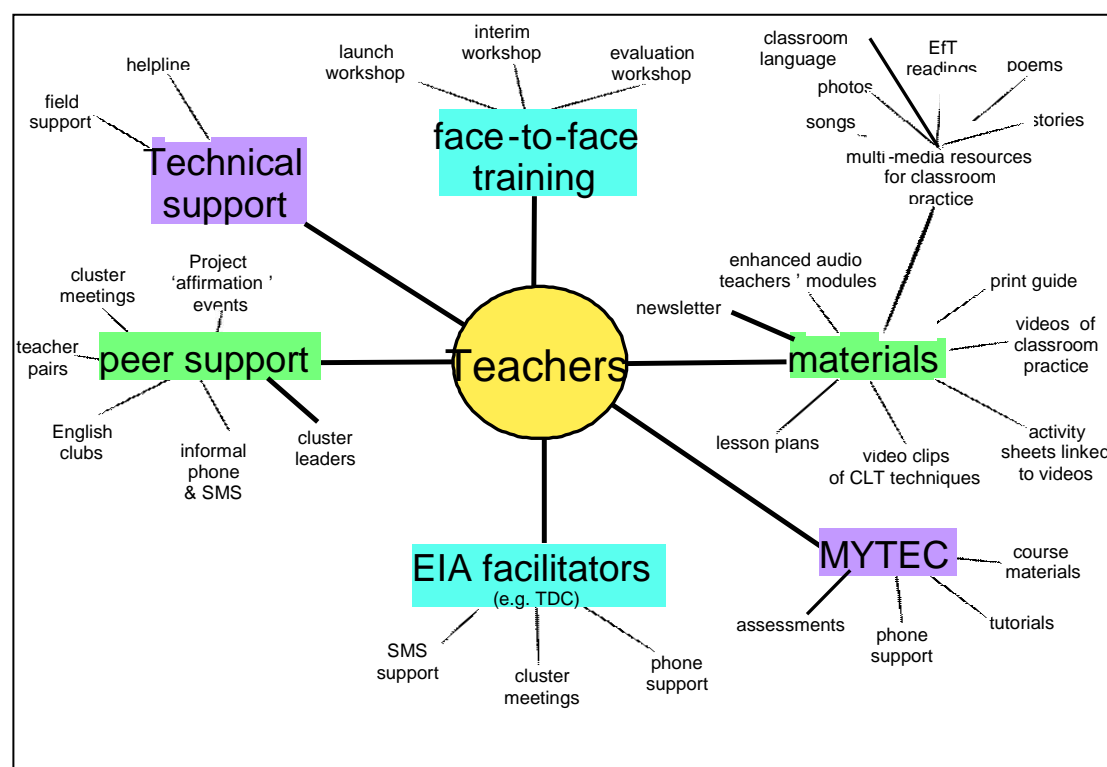
Figure 1: Summary of the EIA School-Based Supported Open Learning Model

Methodology

A mixed method research strategy was adopted to evaluate the impact of mobile technology for enhancing teaching and learning in the English language classroom in Bangladesh via the EIA 'Communicate' strand of the STLP. The methods used included, using a questionnaire, classroom observation, semi-structured interviews with school administrators (SAs)[†] and teachers, as well as a series of group interviews with students. Fieldwork was carried out for data collection during August 2009 and November 2009 in Dhaka, Bangladesh by the first author and two colleague Teacher Development Coordinators (TDCs)[‡]. Six out of fifteen EIA pre-pilot schools were selected at random. Six SAs and twelve teachers were interviewed about their professional development and different aspects of school-based training. Interviews were recorded and conducted in Bangla. All research participants gave their verbal consent to the recording of their interviews, as well as having them used for research purposes. Only the teachers' interviews data is used in this paper.

Analysis of interviews

The analysis that follows focuses on teachers' perceptions of how mobile technology is enhancing the teaching and learning of the English language in Bangladeshi school classrooms. In other words, how the EIA Secondary Teaching and Learning Programme is impacting on teachers' professional development in UCEP schools by introducing mobile technology for enhancing teaching and learning through a school-based support system. The EIA programme is the largest educational development programme in the country at the present time. It is thus very important to evaluate the impact of mobile technology on TPD in

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[†] The head of the UCEP school is called School Administrator, though the head of the school in the mainstream education system is called Headteacher.

[‡] Teacher Development Co-ordinators (TDCs) are the main implementers of the EIA intervention. They have been trained by the Open University EIA team to train the teachers.

the pre-pilot phase of the programme before embarking on the country-wide pilot phase for full scale implementation from February 2010. In the following section, we focus on some findings about the impact of mobile technology on teaching and learning in the English language classroom in Bangladeshi schools.

The recordings of the twelve teacher interviews have been transcribed and then translated from Bangla into English. The initial textual analysis was organised around components of the EIA teacher development programme, such as the workshops or cluster meetings, the audio-visual (AV) materials on the iPod, the school visits and so on, as outlined in Figure 1. The intention had been to collate teachers' comments on the relative merits of each of these components of the iSODL model. However, when this first analysis was complete, we became aware that there seemed to be several key themes, phrases which were repeated again and again by teachers, which cut across their comments on the various components of the programme.

A second analysis was carried out using a more grounded approach (Glaser and Strauss, 1967; Strauss and Corbin, 1990), in which the aim was to identify the key messages that teachers wanted to convey through the interviews. We intended to allow teachers' voices (NMF, 2005) to emerge from the data.

A brief description of the emergent themes is given below, together with extracts from the teacher interview transcripts to illustrate them. We have used the following conventions for the presentation of the data::
- Extracts from the transcripts have not been edited, rather whole paragraphs are presented intact, so that key points can be seen in the context in which they were made.
- Within these extracts, key words or phrases illustrative of the emerging theme have been highlighted in *italics*
- Each piece of evidence is given a two-part reference, where 11.23 would indicate the source as being the 23rd paragraph in the transcript of the 11th teacher interview.

1   *Watching and listening*

Teachers often refer to listening to, or watching the professional development course materials available on their iPods. They talk about using these materials for a number of different purposes, including developing their own pedagogic knowledge:

> *A complete lesson on choral dialogue is demonstrated in the iPod touch. Watching that demonstration we've learned many aspects of choral dialogue* such as style, rules etc. *The demonstration contains both audio and video.* [1.12]

> Some times *I watch a lesson from the video when I think about using alternative methods for delivering that lesson.* I then discuss it with my pair-partner which method will be better. Or sometimes we discuss how I can solve a problem if I face any in the classroom. [4.34]

> *Without video it would have been very difficult initially to understand activities of students and teachers in the classroom* and how teachers are using gesture, which gesture students are picking up rapidly, continuity of lessons and how to use devices and so on. *And audio is helping me to understand when to give which instruction,*

which dialogue or instruction to be used so that students can pick up rapidly etc. [6.38]

They also mention using the resources for preparing for professional development meetings with their peers:

> Personally, *I try to listen to every module from the iPod before attending to the cluster meeting*. I read each module from the Teacher Guide too. *If I do these, then cluster meeting becomes more effective for me. I can understand easily*. [7.27]

Many teachers commented that the AV materials supported their own learning of English language and pronunciation, and improved the use of English language in their classrooms:

> *That* [iPod Materials] *helps me to learn the language and use it in the classroom context. I did not know the language earlier in this way. I knew, but not in this way. I did not even think of taking these to students. I could not think of teaching English of this level to the students! Even we did never learn in this way! We never got tips*! [5.21]

> *The language I use in the classroom is actually taken from the iPod*. [5.23]

We had anticipated that at least some teachers might have found the technology of the iPod at least a little 'alien', or that some may have found it difficult to locate and use the professional or classroom resources available through the iPod, but no teachers reported this. One teacher commented that their familiarity with CD-players made them feel comfortable with how to use the iPod:

> *I use the iPod like a CD player. I run a module and listen to it while working at home*. [2.24]

> *I listen the iPod while working, just like listening music*. [2.25]

2   New opportunities for professional learning

The extract immediately above under interview 2 also links to the second emerging theme: that teachers were exploring the flexibility afforded to them by having tools and materials (both print and AV) that they could access in different times or places, to create new opportunities for professional learning. Teachers report regularly using the iPod materials at home, at school (in breaks and free periods), and travelling between the two.

> Even though I do not have much time to read the teacher guide at home, I try to read those very often. *That always remains with me- when I come to school and when I go back. I try to skim through whenever I get time*. [2.26]

> *I usually use iPod when I am free during school hours or on the way to and from the school or in the house. I use it as often as I get free time*. [3.9]

> *I listen to the song using iPod in the morning when I come to the school and in the afternoon on the way back to home from school*. [9.28]

The poems are more helpful. These are pronounced more steadily and clearly, so I do not need to look at the text. *I read the modules in between the class gaps sitting in a separate room.* [9.29]

At home, I use the iPod only when my kids are asleep. I do not use it when they are awake because they want to play with it! [9.31]

I have listened the choral dialogue at home. After listening I used that with the students in the classroom. [10.30]

Whilst the professional development materials available through the iPod are perceived as making an important contribution to the teachers' development, teachers also recognise that these materials alone are not enough to enable or support that development. One teacher talks of her need to 'go back to school' metaphorically and be supported by peers and facilitators, in her professional learning:

Giving everything in the iPod is not enough. Perhaps, the role of cluster meeting, even though everything is given in the iPod, is just like the role of schools and teachers in learning: even though everything is written in the book, students need to come to schools and teachers need to help them with their learning. I think in that way. [5.36]

3   *Ongoing peer support*

Throughout all of the transcripts, one of the most commonly recurring words is 'discuss'. Teachers refer repeatedly to discussing ideas and practices with their EIA partner teacher in school, or with other peers in cluster meetings and workshops.

Some *new points evolve when we discuss in a pair regarding how we can organise our lessons*, how we can engage students in the class or how we can make them more attentive. *It is a very effective system indeed.* [3.18]

Some times I watch a lesson from the video when I think about using alternative methods for delivering that lesson. *I then discuss it with my pair-partner which method will be better. Or sometimes we discuss how I can solve a problem if I face any in the classroom.* [4.34]

When I practice on my own, I try to speak their [referring to teachers in the iPod] way. *Sometimes I talk about this with my EIA partner over phone. We try to discuss this, about classroom language. It also helps to practice.* [5.27]

During feedback session *in the cluster meeting, we can listen to others and share our experience. It* [cluster meeting] *is important for experience sharing.* [7.52]

I cannot understand module without attending cluster meeting. In fact I will not understand anything without it. [10.49]

We are taking class here. *We are in pair. Something things may not be clear to us which usually becomes clear in the cluster meeting.* [11.51]

4   *Emphasis on practice*

Teachers talk very positively about the need for, and benefit of, a strong practical focus to their professional development activities, that requires them not just to discuss, but to apply new ideas or techniques in the setting of their own classroom practice.

> This is *completely a practical field of learning*. I think *everything should be real life oriented. Here I am learning by doing*, *I am seeing everything practically and therefore I do not have any confusion*. [10.59]

> We could not understand properly if you were not supplying the materials along with a Teacher Guide. *Now we can understand what to do and actually how to do thing in the classroom*. This is quite a good help. [11.45]

> Our [previous] trainings are traditional. [11.55] *Everything is done here [in EIA] through action*. [11.56]

5   *Dealing with anxiety*

When talking about their own knowledge or practice, around a third of the teachers, referred to weaknesses, poor performance or mistakes. Although this was generally in the context of improvement, it raises a question as to where such a perception arises. Such comments were often in the context of being observed whilst carrying out classroom practice. While this is universally reported as a positive, constructive, or even essential aspect of the programme, it is also associated with some level of performance anxiety.

> The advantage of school visit is that we get feedback. And by getting feedback *I can get rid of my weaknesses*. Here cluster meeting is followed by a visit. So they can measure how much we are achieving from the training. [1.44]

> *I am taking the class and not performing well.* I felt that my second class was little bit better than the first one. I could not do that alone! Similarly, I felt I have done even better in the third one. All those were possible by the feedback! TDCs have come and have told us it will not work if I don't do this and this. When I face the same problem next time, I can solve it myself. I think, students are responding bit better! [5.40]

> An observer will find my merits and demerits and will suggest how I can improve. Then *I can be aware and I will not do the same mistakes when I will do the topic next time. I shall also try to overcome my shortcomings. I shall do better* by getting suggestions. [10.51]

6   *Support systems*

Despite the anxieties reported by some teachers as above, other teachers commented on their experience of training and support as 'warm' and 'friendly'.

> Without a field visitor, I can not understand how much I am doing or how good I am performing. I need a judge for that. Environment in the training is different from that of classroom. *So when I come to classroom, when I am introducing a new module, I may feel sometimes that I have done very well.* One cannot always find his own fault. *But the visitor can easily show me where I can do better. He is not scolding me or not saying I am bad. Instead, he is saying that you've done pretty well, but you could do better here and there.* So I also thought how to do better. [9.49]

No one is pressuring me here or no one is saying that you have done this and that mistake. At one point, we get to know our faults. But no one is pointing finger to me so that I may feel embarrassed. The things I lack eventually comes out some way. Or ultimately I come to know the things which I did not know. [11.59]

It is possible that such conflicting emotions between the themes of *Dealing with anxiety* and *Support systems* represent the experience of an internal anxiety surfacing in an external environment that is perceived to be supportive. It is also possible that this apparent contradiction between themes 5 and 6 is due to the way in which support was given by different facilitators: the two themes were generally presented by different teachers, rather than both views being held by the same teacher.

7   Determination and engagement

'I try…' is another of the most commonly recurring phrases in the teacher interviews. There is a real sense of teachers' determination, of repeated effort and practice to master the language, the pronunciation, or the classroom practices that they are being taught.

I watch the video that contains class instructions very often on the iPod. *I try to follow the instructions given in the video. I try to follow the pronunciation and try to pronounce accordingly.* And if I find any error in my pronunciation, *I try to correct it by listening repeatedly the instructions.* [2.27]

For example, *I like their [teachers on the video materials] teaching style, gesture very much and I use those in my class. I also try to follow their 'going to pairs', movement, smartness.* I do it because I think a teacher is the idol to be followed for students. So the teacher must represent herself in a way so that they can learn something. *Therefore, I try to follow the appearance, behaviour, the speaking style of the teachers from the video.* [2.36]

I either listen audio or watch video in the iPod. *I listen the pronunciation of each and every words, there are utter accordingly. I practice repeatedly* so that my pronunciation becomes accurate. [3.28]

I try to follow more or less the style of the teacher whom I liked best [in the video]. [9.25]

8   Making changes

Another commonly recurring phrase was the use of 'We used to… now we…' and variations upon this theme. Two particular topics are mentioned most often here: increased confidence in using the English language, and the introduction of more active learning practices in the classroom.

We used to...	Now we...	Ref
For example, *the way I conducted the class today, I never did it earlier. We never used choral dialogue*, at least not following its structure.	*Now we can use the structure because we learned it* from there [cluster meeting].	1.19
Previously, *I used to teach them using text books…*	*Now I can teach* the students using a new method instead of traditional methods by	4.16

	selecting from a set of methods given in the iPod. It's also helping the students to *increase their listening skill significantly.* Because when they listen to iPod they are not using their books.	
Earlier, when I used to read from books, I thought students do not understand at some point, *they cannot understand further...*	*Now I am using the iPod for the purpose of the listening part, I mean, the active listening.* They listen from the iPod and get a good grasp of the lesson. They are preparing answers. *They build a comprehensive understanding..*	5.15
Now we are not conducting our class the way we did earlier. We have changed it.	*Now, probably we are more active and our students are too.*	7.54 7.55
Let me tell first about active listening. Earlier *when we took the class, we asked the students to open their books. We used to read and asked students to listen and follow….*	There (in EIA) things are not like that. *They taught us to give the students sufficient time so that they can think* during listening or they can concentrate in the lesson. *If we ask them some questions, then they will listen to the audio attentively and finds the answer.* We did not do it earlier. *We are very happy to see that they are listening attentively.* Another thing that we didn't do earlier is the students listen to oral dialogue *and then they practice it with their pairs.*	10.32
Previously there was no scope of using iPod. *We conducted classes in the school where we did not use English that much,* the way usually students are taught here. *Most of the time we didn't listen or speak in English. We also didn't get enough time. The only time we listen English was either when watching movie or news* presentation…	*Now this is happening quite frequent-almost everyday.* Or we are in touch of that for significant time. *…I become a bit more fluent in speaking English, even in writing too...* …*My pronunciation remains the same as before because I do not bother to change that. I emphasize on whether I can speak English or not.* I didn't speak English in the class earlier. *Now I am speaking in English around 80% or 90% time,* sometimes even 100% time. There are many more examples	11.35

Table-1: Changes in classroom practices

9   School visits

In addition to the benefits teachers perceived for themselves from having lessons observed and constructive feedback being given, a few teachers also thought this was an important mechanism for accountability and trust being generated between the teacher participants and the project.

> *We would deceive if there were no field visit.* Let's say, my other partner does not clearly understand the lesson. What could he do? He could not find interest in it. At one stage, *he would probably go back to traditional method of teaching.* [9.46]

10

Field visit increases the sense of responsibility in me. [9.47]

After giving any training, follow up is the process of analysing performance which helps the trained person to achieve his goals. *If there is no follow up of a traditional training, there is no accountability of what he has done or not done. Without follow up, no training can be effective. So to make a training effective, follow up is very important.* [9.60]

Of course, school visit is important. To monitor what I've learned, what I am teaching to my students. *Why do you trust me if I say I've done very well all you've taught me in the cluster meeting. There should always be an observer.* [10.50]

10   Dealing with problems

10.1   Technology

It was anticipated that many teachers would experience technical problems in using unfamiliar mobile technologies (the iPod and speakers), keeping the devices charged up, or in introducing the new technologies into classroom practice. But of the problems reported, only one was technical: that the small portable speakers were not loud enough to be heard above the background noise in their school:

The iPod is helpful but it is creating problem. We cannot use it properly in the classroom because its sound is low compared to the classroom size. The students become annoyed since they cannot listen properly and as a consequence later they cannot guess what was told in the lesson. [10.22]

10.2   Workload

Two of the twelve teachers interviewed commented that they were finding the additional workload a strain. In particular, they were not used to planning or preparing for lessons, and found this extra activity quite challenging:

Everyday I have to conduct three English lessons. If there are 30 working days, *I have to plan 60 lessons, which is quite a heavy load for me, surely a burden on me.* [1.24]

I feel a bit over-loaded. Previously we were taking 6 classes in the traditional way. *Now we are taking three of them using the EIA method and after these three I feel like I am finished.* But I still like EIA training. [2.47]

Summary discussion of emergent themes

School-based teacher professional development

At the heart of the EIA teacher support model, is the notion that teachers will achieve most of their professional development, not in face-to-face training workshops, but back at home and at school; by working with new tools and materials, on their own and with their project partner.

Emergent themes two and three, suggest that there is significant evidence of such practices taking place, and being the driving force behind teachers' professional development in the pre-pilot. Theme 2 shows that the teachers are exploring a number of new settings and opportunities to engage with the materials and tools for their own professional learning, and

in theme 3 teachers are seen to place a high value on the discussions they have about this with their peers. Indeed, as well as studying materials individually and discussing them back at school, several teachers also refer to working through the materials together with their peer groups, for example during breaks or free periods.

Support
Within the EIA teacher support model, the use of innovative materials and tools enables and supports the teachers' professional development activities at home and school. In theme 1, teachers describe repeatedly watching and listening to the materials, in quite a purposeful manner. Teachers particularly emphasise the value of this for developing their own pedagogic knowledge, as well as contributing directly to their own perceived English language proficiency, perhaps most notably in relation to pronunciation. In theme 4, teachers attach a high value to the emphasis on classroom practice within the programme; this is seen to be a key aspect of support – that the materials focus not just on ideas, but upon how teachers can put such ideas into practice.

However, teachers are also keen to point out the need for additional support beyond what is available either through their partner, or through the materials and tools. In theme 6, teachers attach high value to the role of external support personnel, especially where that support is perceived to be warm, friendly, and, well, *supportive*. In particular, teachers perceive high value in the support personnel actually visiting them in school, and observing lessons (theme 9), to the extent that some teachers say they would not be sufficiently motivated to put things into practice without such direct 'in class' support visits.

Teacher perceptions
In theme 5, some teachers seem to express either a lack of confidence in their professional knowledge or skill, or an anxiety about their classroom practice; some have also experienced difficulties with the project technologies, or managing to create time and space for professional learning within their busy lives. Despite this, most teachers seem willing to have invested significant effort into continued engagement with the materials, tools and activities of the project (theme 7), and almost all cite examples (theme 8) of how this has been rewarded or justified by the changes they have been able to bring about in their practice.

Conclusion
The crisis of English language teaching and learning and lack of training in CLT in Bangladesh require urgent responses from the government, as well as from the country's international development partners. Bangladeshi teachers need professional support in developing their own English language and teaching skills. On the basis of the outcomes from this pre-pilot project, open and distance learning has the potential to be an effective technique to support teachers' professional development, and to bring about changes in classroom practice. The use of new mobile technology has been shown to facilitate access to learning, as well as improving the quality of teacher education and training.

Mobile technology has the potential to change the very nature and processes of pedagogy (McCombs et al, 2006). But the use of it in language learning is still under-researched in the context of developing countries including Bangladesh (Power and Shrestha, 2009; Milton, 2002). However, mobile technology enhances teaching and learning activities (Lacina, 2008) and can offer teachers an understanding of new technological applications and professional knowledge, as well as enabling them to reflect on their own learning process, both individually and collectively (Corbeil and Valdes-Corbeil, 2007). The uses of portable media

players (iPods) in classrooms are beginning to emerge and the possibilities seem endless. The Secondary Teaching and Learning Programme is beginning to prepare teachers to benefit from the use of the new and emerging technology in classroom settings. But more research needs to be done on the actual consequences of using portable media players in structured pedagogical contexts in Bangladesh. It is too early to see how far mobile technology, in this case a portable media player (iPod), is being used to support teachers' professional development in English language teaching and learning. However, from the findings of this paper it is evident that the iPod does have a number of advantages for teachers to use it for their professional development in English language teaching and learning in a constrained environment.

The pre-pilot EIA scheme currently being carried out in UCEP schools is a very fruitful initiative aimed 'to secure a professionally trained, well-supported and highly motivated teacher workforce' for the English language classroom in Bangladesh. The EIA project gives cause for optimism that the secondary education sector in Bangladesh could be developed from the current low quality of teaching, by putting resources in place through 'short term interventions completed by longer term institutionalisation and sustainable societal interaction' (Yates, 2007:12) .

Acknowledgement

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